

WHAT IS CLAIMED IS:

1           1. A mobile station in CDMA communication system wherein the  
2 mobile station is composed of a plurality of finger sections in  
3 each of which each of plural radio waves being arrived from a base  
4 station through a plurality of paths is inversely spread to  
5 regenerate data from said base station, and a finger allocating  
6 section for allocating a path timing corresponding to each peak  
7 position of said plurality of radio waves to each of said plurality  
8 of finger sections; each of said plurality of radio waves is  
9 inversely spread in a path tracking range among segments positioned  
10 before and after the path timing allocated by said finger  
11 allocating section, comprising:  
12           said path tracking range being variable in each of said  
13 plurality of finger sections.

1           2. A mobile station in CDMA communication system as claimed  
2 in claim 1, wherein:  
3           said finger allocating section instructs said path tracking  
4 range with respect to each of said plurality of finger sections;  
5 and  
6           each of said plurality of finger sections makes variable said  
7 path tracking range on the basis of the instruction by said finger  
8 allocating section.

1           3. A mobile station in CDMA communication system as claimed  
2 in claim 2, wherein:  
3           said finger allocating section decides said path tracking

4 range in each of said plurality of finger sections on the basis  
5 of each distance of peak positions in said plurality of radio waves.

1 4. A mobile station in CDMA communication system as claimed  
2 in claim 3, wherein:

3 said mobile station in CDMA communication system is composed  
4 of an antenna for receiving a plurality of radio waves being arrived  
5 from said base station through said plurality of paths;

6 an RF section for converting the plurality of radio waves  
7 received by said antenna into analog base band signals;

8 an A/D section for converting the analog base band signals  
9 converted by said RF section into digital base band signals;

10 a delay profile section for inversely spreading the digital  
11 base band signals converted by said A/D section in every  
12 predetermined periods of time to detect the respective peaks of  
13 said plurality of radio waves; and

14 a rake synthesizing section for synthesizing data regenerated  
15 in each of said plurality of finger sections;

16 said finger allocating section allocates a path timing  
17 corresponding to each peak position of the plurality of radio waves  
18 detected by said delay profile section to each of said plurality  
19 of finger sections, and further decides said path tracking range  
20 in each of said plurality of finger sections on the basis of each  
21 of distances of peak positions in the plurality of radio waves  
22 detected by said delay profile section;

23 besides, each of said plurality of finger sections spreads  
24 inversely the digital base band signals converted by said A/D  
25 section within a path tracking range decided by said finger

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26 allocating section among segments positioned before and after each  
27 of path timings allocated by said finger allocating section.  
28 whereby data from said base station is regenerated.

1 5. A method for allocating a finger of a mobile station in  
2 CDMA communication system involving a plurality of finger sections  
3 for spreading inversely each of a plurality of radio waves being  
4 arrived from a base station through a plurality of paths to generate  
5 data from said base station, comprising the steps of:

6 detecting each peak of said plurality of radio waves to  
7 allocate a path timing corresponding to each peak of the positions  
8 detected to each of said plurality of finger sections; and

9 deciding a path tracking range in each of said plurality of  
10 finger sections;

11 said plurality of radio waves being inversely spread within  
12 said path tracking range among segments positioned before and after  
13 said path timing in each of said plurality of finger sections.

1 6. A method for allocating a finger as claimed in claim 5,  
2 wherein:

3 said path tracking range in each of said plurality of finger  
4 sections is decided on the basis of each distance of peak positions  
5 in said plurality of radio waves.

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